



**RAMMOHAN COLLEGE**  
**FACULTY ACADEMIC PROFILE**



Name: Dr. Dibakar Dutta

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Academic Background: M.Sc, Ph.D

Position: Assistant Professor

Awards/Honours: -

Research Interest: Nanomaterials and Nonlinear systems

Project: -

Research Guidance:

Selected Publications:

**A) Published work in refereed academic journals**

1. pH-Switchable Unusual Electrical Conductance of a New Tripeptide-Gold-Nanoconjugate, Sudipta Ray, Dibakar Dutta, D. K. Maiti, NanoMatChem BioDev **1**, (2018) 16.
2. Synthesis and different optical properties of GdO doped sodium zinc tellurite glasses, B. Samanta, D. Dutta, S. Ghosh, Physica B: Condensed Matter **515**, (2017) 82.

3. Multiferroic interfaces in bismuth ferrite composite fibers grown by laser floating zone technique, .G.Figueirasa, D.Dutta, N.M.Ferreira, F.M.Costa, M.P.F.Graça, M.A.Valente, *Materials & Design* **90**, (2016) 829.
4. The Dielectric Breakdown Model applied to explain various morphologies of deposited metallic structures in thin gap metal electro-deposition, A. Chowdhury, D Dutta\* *AIP Advances* **5**, (2015) 067120.
5. Electrical properties of Ag-doped ZnO nano-plates synthesized via wet chemical precipitation method, Reza Zamiri, B. K. Singh, Dibakar Dutta, Avito Reblo, J. M F. Ferreira, *Ceramics International* **40**, (2014) 4471.
6. Structural characteristics and dielectric response of some zinc tellurite glasses and glass ceramics, D. Dutta\*, M.P.F. Graca, M.A. Valente, S.K. Mendiratta, *Solid State Ionics* **230**, (2013) 66.
7. Correlation of ion dynamics and structure in superionic glasses and nanocomposites, D. Dutta and A. Ghosh, *J. Non. Cryst. Solids* **355**, (2009) 1930.
8. Metallic silver nanowires of high aspect ratio: Formation and Mechanism, D. Dutta and A. Ghosh, *Advanced Science Letters* **2**, (2009) 381.
9. Role of Ag<sub>2</sub>S nanoparticles on the dynamics of silver ions in silver-ultraphosphate glass nanocomposites, D. Dutta and A. Ghosh, *Journal of Phys. Chem. C* **113**, (2009) 9040.
10. Electrical relaxation in CdI<sub>2</sub> doped silver vanadate superionic glasses, A. Ghosh, D. Dutta, S. Kabi and A.Ghosh, *Jour. App. Physics* **105**, (2009) 064107.
11. Electrical properties of nanostructured magnetite near Verwey transition, P. Brahma, S. Dutta, D. Dutta, A. Ghosh, S. Banerjee and D. Chakravorty, *Journal of Magnetism and Magnetic Materials* **321**, (2009) 1045.
12. Correlation of ion dynamics and structure of superionic tellurite glasses, D. Dutta and A. Ghosh, *J. Chem. Phys* **128**, (2008) 044511.
13. Relaxation dynamics of Ag<sub>4</sub>Te<sub>3</sub>O<sub>8</sub> glass nanocomposites embedded with Ag<sub>2</sub>S nanoparticles, D. Dutta and A. Ghosh, *J. Chem. Phys* **127**, (2007) 044708.

14. Giant Dielectric Permittivity in Aligned Silver Nanowires Grown within (AgI) (AgPO<sub>3</sub>) glasses, P.K. Mukherjee, D. Dutta, S. Bhattacharyya, A. Ghosh and D. Chakravorty, *Jour. Phys. Chem. C* **111**, (2007) 3914.

15. Dynamics of Ag<sup>+</sup> ions in Ag<sub>2</sub>S doped superionic AgPO<sub>3</sub> glasses, S. Bhattacharyya, D. Dutta, and A. Ghosh, *Phys. Rev. B* **73**, (2006) 104201.

16. Dynamics of Ag<sup>+</sup> ions in binary tellurite glasses, D. Dutta and A. Ghosh, *Phys. Rev. B* **72**, (2005) 024201.

17. Ionic relaxation in AgI–Ag<sub>2</sub>O–TeO<sub>2</sub> glasses, D. Dutta and A. Ghosh, *J. Phys.: Condens. Matter* **16**, (2004) 2617.

### **B) Published contributions and presentations to academic conferences**

18. Diffusion limited aggregation and some natural patterns, D. Dutta, “UGC (University Grant Commission) sponsored refresher course in Physics conducted by Academic Staff College, University of Calcutta” during **July 07-26, 2014**.

19. Continuous metallic silver nanowires grown in glass-nanocomposite templates D. Dutta, "International Conference and Humboldt-Kolleg On Structural Characterization of Materials Relevant to Nanotechnology, Biomedical and Geobiology" being organized by the Department of Physics, Banaras Hindu University during November **7-9, 2008**.

20. Relaxation dynamics in superionic glasses, D. Dutta, S. Bhattacharyya and A. Ghosh, 16th Annual General Meeting of MRSI and Theme symposium on “Materials for Automotive Industries “, NCL, Pune during February **10-12, 2005**.

21. Ionic conductivity and relaxation dynamics of some fast ion conducting glasses, S. Bhattacharyya, D. Dutta and A. Ghosh, 6th National Conference on Solid State Ionics. Physics Department, Jadavpur University, Kolkata –700032 during October **5 – 7, 2004**.

22. Conductivity relaxation in some fast ion-conducting AgI – Ag<sub>2</sub>O – TeO<sub>2</sub> glasses, D. Dutta and A. Ghosh, 46th Annual D.A.E Solid State Physics Symposium. School of Studies in Physics, Jiwaji University, Gwalior-74011 (MP), India during December **26-30, 2003**.